UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

FEDERAL TRADE COMMISSION, Plaintiff, v. DIRECT MARKETING CONCEPTS,INC, et al, Defendants	CIVIL ACTION NO. 04-CV 11136GAO

AFFIDAVIT OF DAVID MYSLABODSKI PhD.

I, David E Myslabodski under oath declare as follows:

Experience and Qualification

1. I am an Independent Advisor to the Seaweed Industries and have been studying different species of sea vegetation for over twenty six years. Since 1999 I have been acting as a consultant providing my professional services all over the world. I have been involved in a variety projects such as:

- Worldwide: Design of the technical protocols for the accurate and precise determination of the low molecular weight fractions of carrageenans as required by recently introduced EU legislation.
- ISRAEL. Establishment of the first commercial sea vegetable farm. Product and process development. Assistance in analytical protocols to develop the necessary tests to have the sea vegetables approved as food grade by the Israeli authorities. Assistance in having the products certified as Kosher by the regional [Mate Asher] Rabbinical Council and also certified "Kosher Le Mehadrin", the strictest form of Kashrut in the State of Israel.

- ESTONIA. Modernization options for a Furcellaran manufacturing plant.

Education

2. I received a Bachelors of Science from the Marine Sciences College with a specialty in Chemical Oceanography.

3. I obtained from the Norwegian Government a NORAD scholarship to study seaweed processing at the Biotechnology Institute [Formerly known as the Norwegian Institute of Seaweed Research] in Trondheim, Norway where I studied for 3 years.

4. I attended the University of Trondhein to complete my graduate studies under Dr Ingenior. Although the degree is officially in marine biochemistry my studies were fully focused on the processing of seaweeds. A true and accurate copy of my curriculum vitae is attached as Exhibit A.

5. I have consulted in the seaweed business in countries such as USA, Canada, Mexico, Chile, France, Ireland, Estonia, Israel, Senegal, South Africa and Australia. I have also attended seaweed-related meetings in Spain, UK, Italy, Norway, Portugal China and the Philippines.

6. At the XVII International Seaweed Symposium [Cape Town, South Africa, 2001] I gave a presentation regarding the worldwide status of the seaweed markets and I was invited to contribute to FAO's Fisheries Circular "Prospects for seaweed production in developing countries."

7. Last year I was invited to deliver a presentation at the Northeast Aquaculture Conference and Exposition [NACE 204] in Manchester, NH. I presented "The future prospects for seaplant management and farming in the Americas".

8. I have published research papers relating to seaweed and the commercialization of seaweed.

9. I currently hold the position of Vice President of the Maine Seaweed Council and also served as President.

Review of SeaVegg product

10. ITV Direct, Inc. asked that I watch the Sea Vegg infomercial and review the transcript of the advertisement. I was also supplied with a copy of the label, and the certificate of analysis.

11. I have also read the declaration of Christine Skibola Ph.D. currently at the School Public Health at UC Berkley in Berkeley, CA.

12. Although I was informed by ITV that SeaVegg is a proprietary blend, knowing that the raw materials are sourced from Ireland, one can find the list of raw materials in the "Guide to commercially important seaweeds on the Irish coast." Published in 2001 by the Irish Seaweed Center.

13. A review of the label and the advertisement both display the following disclaimer: "These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease." This disclaimer also appears in the infomercial.

Weight Management

14. Seaweeds have a long established use in weight management as part of natural medicine. Bladderwrack [Fucus vesiculosus] has been used in slimming teas for the management of obesity. Two medical doctors of the Metropolitan Medical Center at New York Medical College stated that Agar, by virtue of its bulking properties and relative in-absorbability, has been used in the treatment of obesity[1]. Other respected doctors have determined that Laminaria, Fucus Vesiculosus and Irish Moss have been traditionally used for weight loss.[2]

15. Eric F W Powell PhD, ND, discusses the weight loss benefits of seaweed in his book fully dedicated to Fucus vesiculosus, "Kelp The Health Giver"[3]. Dr. Powell stated the following: "...the value of Kelp in obesity is...mainly due to its action on the thyroid gland. But this is not wholly so. We find that this remedy has a normalizing influence on the fat cells" and further states: " Thin undernourished people need have no fear that, as Kelp is useful in obesity, it will cause the scraggy person to lose more weight. Much the reverse; practitioners have observed that while Kelp undoubtedly plays a part in reduction it also so encourages normal nutrition that the thin tend to put on more weight. I have records of successes in both obesity and malnutrition and Kelp has played and important role in producing a normal condition of body in all of them."[4]

16. In a paper published in 2000 "F. vesiculosus can represent a valid alternative, especially when consuming sodium-restricted diets. The use of iodine to treat obesity can ensure the intake of the total daily requirement and, consequently, optimal thyroid function."[5]

Fibromyalgia.

17. In 2000, a study concluded that dietary Chlorella [a green algae] supplementation may help relieve the symptoms of fibromyalgia in some patients and that a larger, more comprehensive double-blind, placebo-controlled clinical trial in these patients is warranted.[6]

18. In 2001, the same group [Medical College of Virginia] reported that "The potential of Chlorella to relive symptoms, improve quality of life, and normalize body functions in patients with fibromyalgia, hypertension, or ulcerative colitis suggests that larger, more comprehensive clinical trials of Chlorella are warranted."[7]

Arthritis.

18. Doctor Yves Donadieu stated one of the major modern therapeutic uses of seaweed is the treatment of Rheumatism. More specifically, he recommends therapeutic baths of Laminaria digitata[8] and Fucus vesiculosus for all forms of chronic rheumatisms. The authors list the various seaweeds indicated for the treatment of Rheumatisms.[9] Primary use: Laminaria digitata and Fucus vesiculosus. Secondary uses include: Laminaria hyperborea, Laminaria saccharina and Ascophyllum nodosum. [10]

19. Eric F W Powell PhD, ND recommends kelp as part of a natural diet to treat rheumatism [11]

20. Native Americans have used Bladderwrack in treating inflammation, sprains and rheumatism for centuries.[12]

Summary of Scientific studies as they relate to inflammation

21. In a study conducted on the in vivo and in vitro anti-inflammatory effects of Enteromorpha prolifera, the authors reported: "These results suggest that pheophytin a from Enteromorpha prolifera[seaweed] has a potent anti-inflammatory activity." [13]

22. In a study on the role of fucoidan in blocking CD62L in delayed-type hypersensitivity [DTH] in model mouse studies, the authors reported: "Since DTH response is one of the most significant features of several chronic inflammatory diseases, our data shows that blocking CD62L function may be beneficial for the treatment of these diseases in humans."[14]

23. In a 2003 study, the authors report "This study shows that a high level of inhibitory activity can be achieved with low molecular weight carbohydrate molecules and that the potential applicability of fucoidan oligosaccharides for therapeutic complement inhibition is worthy of consideration."[15]

24. Dr. HS Kang studied the inhibitory effects of Ecklonia stolonifera, Ulva pertusa and Symphyocladia latiuscula in reactive oxygen species [ROS] generation. The authors considered the role of ROS in degenerative diseases including rheumatism. In further studies, five compounds derived from Ecklonia stolonifera inhibited total ROS generation.[16]

25. From a US patent for "Compositions and methods comprising fucans, and particularly fucoidan, for the treatment of surgical adhesions, arthritis, and psoriasis". "The fucans provide significant therapeutic affects for each of these diseases while also providing low side effects."[17]

Diabetes

26. Seaweed and its constituents have proven to be effective in the treatment of diabetes and possibly reverse the disease. Below is a non exhaustive summary of the studies conducted:

27. While studying the hypoglycemic properties of several seaweeds, Laminaria, Saccoriza, Fucus, Himanthalia and Codium, ingestion of seaweed extract was found to lower blood glucose levels [18 % in normal and 50 % in diabetic rabbits].[18]

28. A 2002 study concluded: "These results suggest that the extract from ezoishige [P. babingtonii] has potent alpha-glucosidase inhibitors and would be effective for suppressing postprandial [after meal] hyperglycemia."[19]

29. In a review of the biological and medicinal aspects of Vanadium a substance commonly found in seaweed, the author stated: "With respect to the medicinal potential of Vanadium compounds, their insulin-mimetic behavior and hence efficacy in the oral treatment of both forms of diabetes mellitus is extemporated."[20]

30. Dr. Takeshi Nagai found that the oxygen scavenging properties of the seaweeds were correlated to its polyphenol content, and stated: "This shows that these beverages have a

potential as health drinks with functional properties and for patients suffering cancer, cardiovascular diseases, and diabetes.[21]

31. In 2004 Kyeung-Soon Lee concluded: "Our results showed that water extract of sea tangle reduces plasma glucose and protects the antioxidant system in diabetic rats. These results suggest that water extract of sea tangle contain unknown physiologically active compounds, other than alginic acid, that may exert a protective effect against diabetes."[22]

32. Another patent was obtained to help treat diabetes and diabetic complications using seaweed extract. The active ingredient used was a seaweed polysaccharide [a rhamnan].[23]

33. A recent study published in 2004 concluded: "Treatment of diabetic rats with fucoidan restored venular control of capillary flow and increased NO levels."[24]

34. In a 2005 report on the protective effect of Sargassum polycystum against lipid peroxidation on rats it was concluded that: "This observation shows that the seaweed crude extract probably acted to protect against acetaminophen-induced lipid peroxidation through their free radical; scavenging property."[25]

Cancer

35. ITV has provided the court and the FTC with hundreds of studies demonstrating the safety and efficacy of seaweed and its constituents including the beneficial effect of seaweed and cancer. Christine Skibola the FTC's "expert" recognizes the health benefits in her affidavit. Below is a non exhaustive list of studies conducted which clearly indicate that seaweed and its naturally occurring substances may prevent and possibly cure cancer.

36. I. Yamamoto isolated seaweed compounds and found that they had a strong tumor inhibiting effect against sarcoma that was implanted subcutaneously in mice.[26]

37. In a 1981 review of the biological properties of seaweeds, Jane Teas PhD suggests that seaweeds are a protective factor against cancer. Experimentally, seaweeds appeared to have anti-tumor activity against sarcoma in mice. The author suggests that breast cancer could be prevented and that the consumption of seaweeds in Japan could be an important factor in the low incidence of breast cancers in that country.[27]

38. In a later paper, the same author proposes several mechanisms by which Laminaria prevents cancer. Finally, the author suggests that Laminaria may play a role in preventing either the initiation or the promotion of breast cancer.[28]

39. In a trial at the Naylor Dana Institute for Disease Prevention, the authors found that some seaweed extracts had up to 96 % inhibitory effect on mutagenicity. [29]

40. While studying the inhibitory effects of dietary Laminaria against breast cancer induced by DMBA in laboratory rats, Jane Teas PhD and colleagues found that the rats that had consumed seaweeds had a significant delay in the appearance of the first tumor. Also, these animals had less breast carcinomas. Finally, these rats had 13 % less confirmed adenocarcinomas.[30]

41. In a 1985 study on the inhibitory effects of eight different seaweeds included in the diet of experimental rats, showed a significant decrease in the incidence of intestinal cancer in rats fed Eisenia bicyclis, Laminaria angustata, and Porphyra tenera.[31]

42. I. Yamamoto studied the inhibitory effects of 9 different seaweeds against implanted sarcoma in mice. The authors reported inhibition rates from 70.3 to 83.6 % for diets that contained Laminaria angustata and Laminaria japonica. Intraperitoneal injections containing seaweed extracts of 10 different seaweeds had inhibitory rates ranging from 61.9 to 95.2%.[32]

43. In a 1987 study on the inhibitory effect of several seaweeds in DMBA-induced breast cancer in laboratory rats, Porphyra tenera, Laminaria religiosa and Laminaria japonica demonstrated inhibitory effects. The authors reported a significant delay in the appearance of the first tumor in the seaweed fed animals. They also reported a significant reduction in weight of the tumors in the seaweed fed animals.[33]

44. A 1988 paper from the University Medical School in Nagoya, Japan reported on the effects of beta-carotene on the incidence of prostate cancer. The authors interviewed 100 patients with prostate cancer and two control groups. The authors reported that the content of carotene and vitamin A in seaweeds is suggestively protective against prostate cancer.[34]

45. Of several agents studied only AZT and the seaweed extract demonstrated therapeutic activity against leukemia in mice.[35]

46. Hoshiyama Y and Sasaba report that in cases of single and multiple cancers ingestion of seaweeds had a [negative] dose response relation.[36]

47. The same group also reported on the incidence of colorectal cancer in relation to dietary, smoking and drinking habits in Saitama prefecture. The authors report that the consumption of seaweeds was inversely related to both colon and rectal cancer risks.[37]

48. Dr. Ellouali reports that fucans are effective [85% & 50% respectively] in inhibiting the proliferation of fibroblast cells and colon adenocarcinomas.[38]

49. Fucoidans extracted from Sargassum thunbergii act specifically in mice as activators of the reticuloendothelial system. This suggests that the anti tumor activity of fucoidan is related to the enhancement of the immune responses. The authors indicated that these results demonstrate that seaweed-derived fucoidan may open new perspectives in cancer chemotherapy. [39]

50. The authors of a 1994 report cite epidemiological studies that indicate that ubiquitous consumption of seaweeds in Japan may be a possible protective factor against some cancers. The authors studied the extracts of eight dietary seaweeds. Enteromorpha and Porphyra showed strong suppressive activities in both antimutagenic and antipromotion tests. Beta-carotene is mentioned as the possible active seaweed ingredient. The results suggest that seaweeds have possible anti mutagenic and anti promotion activities probably associated with anti tumor activity.[40]

51. Dr. Zhuang isolated several fucan fractions from Sargassum thunbergii and reported that they had anti tumor activity in mice.[41]

52. The authors of a 1995 study found that the fucan extracted from Sargassum thunbergii have various metabolic effects that lead to inhibition of lung metastases.[42]

53. D. Riou of Pharmacologie Marine, Faculte de Pharmacie, Nantes, France studied the anti tumor and anti-proliferative effects of a fucan extracted from Ascophyllum nodosum. The authors studied the fucan effects on a cell line [NSCLC-N6] derived from human broncho-pulmonary carcinoma. It is noteworthy that the authors mention that this cell line is particularly chemo-resistance. The results also show anti tumor activity in mice. These results also indicated that this fucan is a very potent agent in cancer therapy.[43]

54. Scientists at the Marine and Highland Research Center, Japan, screened 1,446 samples extracted from 306 different species of Japanese seaweeds for in-vitro anti tumor activity against lymphoid leukemia cells. The authors found four extracts having strong anti-leukemia activity.[44]

55. In a study on Enteromorpha prolifera extracts acting as a suppressive agent against the initiation and promotion of in-vivo induced skin cancer in mice, the authors propose pheophytin-a as the active agent present in the seaweed.[45]

56. In study published in 2000, the authors discuss the role of Selenium and Iodine in the prevention of breast cancer. They further hypothesize that the consumption of seaweeds in Japan could be linked to the low incidence of breast cancer in that country.[46]

57. Dr. N. Takahashi isolated and identified the amino acid L-tryptophan from the holdfast of Laminaria. This compound has been found to have a strong inhibitory activity against breast cancer.[47]

58. In a study on the in-vivo and in-vitro chemo-preventive effects of Wakame [Undaria pinnatifida] on breast cancer, the authors feed Wakame extracts to rats and observed strong suppressive effect. The Wakame extract induced apoptosis in 3 different human breast cancer cell lines. These effects were stronger than that of the common chemotherapeutic agent used today to treat breast cancer.[48]

59. Based on a review of the literature and on his own research, Dr. S Venturi hypothesized about the role of Iodine in the prevention of breast cancer. The author discussed the anti-oxidant function of Iodide in the breast. The author points to the ability of the breast tissue to concentrate Iodides almost exclusively during pregnancy and lactation as a protective strategy against breast cancer.[49]

60. Another study reported that Fucans act as a modulator of a surface protein which is involved in angiogenesis.[50]

61. N. Miyanishi and colleagues studied the effects of Laminaran oligomers on human monocytes. The authors prepared oligomers derived from Laminaria digitata Laminaran and incubated human monocytes with such products. The oligomers caused strong inhibitory activity against the proliferation of human leukemic cells.[51]

62. In a test of fucan activity against implanted sarcoma, lung, and melanoma cells in mice, it was found that an increasing sulfate level in fucoidans increases its anti-angiogenic and anti tumor activities.[52]

63. Cladosiphon fucan inhibited the attachment of Helicobacter pylori thus reducing the risk of associated gastric cancers.[53]

64. H. Maruyama studied the anti tumor mechanism of a fucoidan extracted from the sporophyll of Undaria pinnatifida. The author followed the fucan's activity in experimental mice and concluded that fucoidan is affective against cancer due to its activation of NK [Natural Killer] cells.[54]

65. Japanese scientists isolated and identified four steroidal ketones from the holdfast of Laminaria japonica. Such products have shown to exhibit activity against human breast cancer cells.[55]

66. The results of several studies of extracts of Scytoshiphon lomentaria suggest that the extracts cause cell death in HL-60 leukemia cells.[56]

67. Hosokawa M and colleagues studied the anti cancer properties of fucoxanthin extracted from Undaria pinnatifida against human colon cancer cell lines. The results indicate that fucoxanthin may act as a chemo-preventive and/or chemo-therapeutic agent against colon cancer.[57]

68. In a report on the inhibitory properties of Fucoidans on HS-Sultan [Human Caucasian plasma cell plasmacytoma] cells, the authors found that fucans inhibit proliferation and induce apoptosis in human lymphoma cells.[58]

69. Results from a recent study show that Undaria's water extracts activates various proteases and contributes to intracellular signaling to induce apoptosis in a human breast cancer cell line.[59]

Christine Skibola and her Contradictions

70. The Federal Trade Commission and their "expert" cannot dismiss the overwhelming evidence that supports the "claims" made in the advertisement.

71. Christine Skibola states that in her review of the scientific literature, she was unable to find any studies suggesting that seaweed consumption treats or prevents fibromyalgia, diabetes or arthritis. From the above referenced studies and the studies provided by ITV, it is clear that there is an abundance of scientific research which is readily available and validates the beneficial effects of seaweed in these diseases.

72. Chistine Skibola also states in her affidavit that she conducted a human trial with Fucus vesiculous. She stated in her sworn affidavit that her "pilot study does not establish that seaweed supplementation reduces the risk of any cancer, nor that it treats cancer". Yet she is quoted in a press release issued by the University of California Berkley as stating "...that kelp may also contribute to these reduced cancer rates among Japaneses women".[60] Her own study also concluded that: "these studies suggest that seaweed may be another important dietary component apart from soy that is responsible for the reduced risk of estrogen-related cancers observed in Japanese populations.[61]

Safety Concerns

73. I have reviewed a certificate of analysis for SeaVegg and the product meets the levels for Mercury Arsenic and Lead. The certificate also shows compliance with the microbiological limits.

74. In addition the label has a voluntary Iodine warning and the standard FDA disclaimer.

75. Although, I fully agree with Chritine Skibola's statement regarding Arsenic, I do not see how this statement applies to SeaVegg which has certificates of analysis and is manufactured under Good Manufacturing Practices.

Conclusion

75. After reviewing the infomercial, I do not believe many "claims" were made about the product, but rather discussed seaweed in general. Despite both the FTC's allegations and Christine Skibola's opinion, I believe that ITV has a reasonable basis to make the "claims" identified by Christine Skibola.

76. Seaweed and its naturally occurring substances, many of which would be found in the product Sea Vegg may help with weight management, and treatment or prevention of arthritis, diabetes, fibromyalgia and could possibly cure cancer.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this 13 day of September, 2005 in Santa Barbara, California

David Myslabodski Ph.D.

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